



# California Regional Water Quality Control Board

## Santa Ana Region



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Arnold Schwarzenegger  
Governor

September 18, 2006

Mr. Darren Newton  
BRAC Environmental Coordinator  
Marine Corps Air Station El Toro  
Base Realignment and Closure  
7040 Trabuco Road  
Irvine, CA 92618

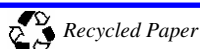
### **COMMENTS ON EVALUATION OF BEST MANAGEMENT PRACTICES FOR CONTROL AND REDUCTION OF SELENIUM, NITROGEN AND TOTAL DISSOLVED SOLIDS DISCHARGES TO PETERS CANYON WASH IN THE SAN DIEGO CREEK/NEWPORT BAY WATERSHED, FORMER MARINE CORPS AIR STATION, TUSTIN**

Dear Mr. Newton:

We have completed our review of the above-referenced document, dated June 29, 2006, which we received on June 30, 2006. The Navy is discharging treated groundwater to Peters Canyon Wash, in the San Diego Creek/Newport Bay watershed, under California Regional Water Quality Control Board (RWQCB), Santa Ana Region Order No. R8-2006-17 and NPDES Permit No. CA80000404. The effluent from the facility's groundwater remediation systems contains elevated concentrations of selenium, nitrogen and total dissolved solids (TDS). The purpose of the submitted document is to identify and assess selenium, nitrogen and TDS control and reduction best management practices (BMPs), to alleviate the elevated concentrations of selenium, nitrogen and total dissolved solids (TDS) in the effluent, and thereby comply with the requirements of the discharge permits. Included with the document is a schedule for completing the tasks identified in this document.

A total of nine BMPs were evaluated by the Navy, in order to determine the feasibility of their implementation at the facility. The approaches considered were: 1) treatment system optimization to reduce the volume of the effluent discharged; 2) reuse of the effluent for irrigation, after additional treatment; 3) delivery of the effluent to Irvine Ranch Water District (IRWD) for use as reclaimed water; 4) containment and evaporation of the effluent in surface ponds; 5) discharge to the Orange County Sanitation District's (OCSd) sanitary sewer; 6) discharge of effluent to the groundwater by means of infiltration wells; 7) re-use of the effluent for irrigation, after blending with water supplied by IRWD; 8) recycling the effluent to an industrial facility for use as process water; 9) trucking and disposal of the effluent at a licensed treatment/disposal facility. After

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evaluation of the nine options, the following three were selected for further evaluation: system optimization, infiltration, and discharge to the OCSD sanitary sewer. The three options are described in further detail below.

**System Optimization**

The existing groundwater extraction wells will be evaluated to ensure that the contaminant mass removal efforts are accurately targeting the appropriate water-bearing zones. Extraction wells will be evaluated to maximize the removal of methyl tert butyl ether (MTBE) by utilizing specific extraction wells that are located in areas with the highest concentrations of MTBE.

**Infiltration Pilot-Study**

In order to determine the amount of groundwater that can be infiltrated using infiltration wells, a study is planned for UST site 222. A work plan for the infiltration pilot study was received on August 31, 2006. Board staff is currently reviewing the work plan.

**Sewer Discharge**

The Navy is coordinating with OCSD and other entities to obtain a permit to discharge the effluent from the treatment systems to the sanitary sewer.

We concur with the approach for determining and evaluating the final selected BMPs for reducing and/or eliminating the discharge of treated groundwater containing selenium, nitrate and TDS, and accept the proposed schedule for completing the tasks.

If you should have any questions, please call me at (951) 782-4498, or send e-mail to [phannon@waterboards.ca.gov](mailto:phannon@waterboards.ca.gov).

Sincerely,



Patricia A. Hannon  
SLIC/DoD Section

cc via electronic copy:

Mr. (Ram) Anantaraman Peddada, Dept. of Toxic Substances Control  
Mr. Marc P. Smits, Dept. of the Navy, BRAC Prog. Mang. Office West  
Mr. James Ricks, U. S. EPA, Region IX

